

CLAIMS:

1. A method for determining whether a situation is logically true or false upon occurrence of an event, said method comprising:

using conditions associated with said situation in combination with current
5 values of parameters related to said conditions to create a database of current thresholds each corresponding to respective limits which characterize the situation and at least one of which is a composite threshold that encapsulates multiple conditions that can be directly compared with a single respective value of a parameter associated with an event;

10 responsive to an event, comparing successive parameters associated with the event with respective ones of the current thresholds until either there are no more thresholds to be compared or until it can be definitively established that the situation is logically true or false; and

prior to processing a subsequent event, updating the current thresholds in
15 said database.

2. The method according to Claim 1, further including blocking response to, or rejecting, subsequent events pending completion of updating the current thresholds in the database.

3. The method according to Claim 1, wherein the successive thresholds are
20 compared according to a predetermined hierarchy so parameters are processed in progressively decreasing orders of importance.

4. The method according to Claim 1, wherein the event is associated with a transaction that must be authorized prior to completion and the method includes comparing at least one parameter with a corresponding boundary threshold and
25 rejecting the transaction if the at least one parameter does not pass the corresponding boundary threshold.

5. The method according to Claim 1, wherein the event is associated with a transaction that must be authorized prior to completion and the method includes comparing at least one parameter with a corresponding boundary threshold and

authorizing the transaction if the at least one parameter passes the corresponding boundary threshold.

6. The method according to Claim 4, wherein the at least one parameter relates to a location from which a transaction is performed and the corresponding
5 boundary threshold is a composite threshold that relates to a geographical boundary within which the transaction may be authorized.

7. The method according to Claim 1, including computing at least one of said thresholds in response to triggers generated by a real-time clock, the real time clock being set or otherwise modified in response to said events.

10 8. The method according to Claim 4, wherein the at least one parameter relates to a monetary value and the corresponding boundary threshold relates to a monetary value that may be authorized.

9. The method according to Claim 1, further including updating the current thresholds based on external information.

15 10. The method according to Claim 7, wherein at least one of said thresholds relates to a geographical location from which a subsequent event may be validly initiated.

11. The method according to Claim 7, including generating one or more time-histories each relating to events originating at a specific time range prior to
20 subsequent event and using said time-histories to update the threshold for the subsequent event

12. The method according to Claim 11, wherein the boundaries of the time histories vary from client to client randomly or arbitrarily.

13. A system for determining whether a situation is logically true or false upon
25 occurrence of an event, said system comprising:

a database of current thresholds each corresponding to respective limits which characterize the situation and at least one of which is a composite threshold that encapsulates multiple conditions that can be directly compared with a single respective value of a parameter associated with an event;

a synchronous processor responsive to an event for comparing successive parameters associated with the event with respective ones of the current thresholds until either there are no more thresholds to be compared or until it can be definitively established that the situation is logically true or false; and

5 an asynchronous processor responsive to the event for updating the current thresholds in said database prior to processing a subsequent event.

14. The system according to Claim 13, wherein the synchronous processor is adapted to block response to subsequent events pending completion of updating the current thresholds in the database.

10 **15.** The system according to Claim 13, wherein the synchronous processor is adapted to compare successive thresholds according to a predetermined hierarchy so parameters are processed in progressively decreasing orders of importance.

16. The system according to Claim 13, wherein the event is associated with a transaction that must be authorized prior to completion and the synchronous pro-
15 cessor is adapted to compare at least one parameter with a corresponding boundary threshold and to reject the transaction if the at least one parameter does not pass the corresponding boundary threshold.

17. The system according to Claim 13, wherein the event is associated with a transaction that must be authorized prior to completion and the synchronous pro-
20 cessor is adapted to compare at least one parameter with a corresponding boundary threshold and to authorize the transaction if the at least one parameter passes the corresponding boundary threshold.

18. The system according to Claim 16, wherein the at least one parameter relates to a location from which a transaction is performed and the corresponding
25 boundary threshold is a composite threshold that relates to a geographical boundary within which the transaction may be authorized.

19. The system according to Claim 13, wherein the asynchronous processor is adapted to compute at least one of said thresholds in response to a trigger generated by a real-time clock in response to said event, the real time clock being set or
30 otherwise modified in response to said events.

20. The system according to Claim 16, wherein the at least one parameter relates to a monetary value and the corresponding boundary threshold relates to a monetary value that may be authorized.

21. The system according to Claim 13, wherein the asynchronous processor is
5 adapted to update the current thresholds based on external information.

22. The system according to Claim 19, wherein at least one of said thresholds relates to a geographical location from which a subsequent event may be validly initiated.

23. The system according to Claim 19, wherein the asynchronous processor is
10 adapted to generate one or more time-histories each relating to events originating from a common time origin and using said time-histories to update the thresholds.

24. A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for determining whether a situation is logically true or false upon occurrence of an
15 event, said method comprising:

using conditions associated with said situation in combination with current values of parameters related to said conditions to create a database of current thresholds each corresponding to respective limits which characterize the situation and at least one of which is a composite threshold that encapsulates multiple
20 conditions that can be directly compared with a single respective value of a parameter associated with an event;

responsive to an event, comparing successive parameters associated with the event with respective ones of the current thresholds until either there are no more thresholds to be compared or until it can be definitively established that the
25 situation is logically true or false; and

prior to processing a subsequent event, updating the current thresholds in said database.

25. A computer program product comprising a computer useable medium having computer readable program code embodied therein for determining whether a situation is logically true or false upon occurrence of an event, said computer program product comprising:

5 computer readable program code for causing the computer to using conditions associated with said situation in combination with current values of parameters related to said conditions to maintain a database of current thresholds each corresponding to respective limits which characterize the situation and at least one of which is a composite threshold that encapsulates multiple conditions that can
10 be directly compared with a single respective value of a parameter associated with an event;

computer readable program code responsive to an event for causing the computer to compare successive parameters associated with the event with respective ones of the current thresholds until either there are no more thresholds to
15 be compared or until it can be definitively established that the situation is logically true or false; and

computer readable program code for causing the computer to update the current thresholds in said database prior to processing a subsequent event.